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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/641,123	08/16/2000	Leon Awerbuch	4424791-0002	3791

7470 7590 02/26/2003

WHITE & CASE LLP  
PATENT DEPARTMENT  
1155 AVENUE OF THE AMERICAS  
NEW YORK, NY 10036

EXAMINER

FORTUNA, ANA M

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 02/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/641,123

Applicant(s)

Awerbuch

Examiner

Ana Fortuna

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Dec 5, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 27-29 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 10/9/8/1, 11/1, 12/11/1, 14-18, 8/8/1, 27-29 is/are rejected.
- 7) ☒ Claim(s) 6, 6, 7, 8/6, 9/8/6, 10/9/8/6, 11/4, 11/6, 11/7, 12/11/4, 12/11/1 '4, 12 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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**DETAILED ACTION**

***Claim Rejections - 35 U.S.C. § 103***

1.

***Claim Rejections - 35 U.S.C. § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 3, 5, 8, 13, 14-18, 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Al-Samadi (6,113,797) (hereinafter '797).

4. Claims 1-3, 5, 8/1, 9/8/1, 10/9//8/1, 11/1, 12/11/1, 13, 14, 15, 16, 17, 18, 27, 28, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hassan (WO 99/16714).

***Allowable Subject Matter***

5. Claims 4, 6, 7, 8/6, 9/8/6, 10/9/8/6, 11/4, 11/6, 11/7, 12/11/4, 12/11/7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to disclose the blending or treating a portion of the feed water prior to desalination systems of the type claims in claims 4 and 6, or vapor compression distillation, and

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its advantages in increase of the top operating temperature of the system and recovery of potable water. Arguments response regarding to the head operated distillation units, e.g MSFD, etc. is persuasive.

### ***Response to Arguments***

6. Applicant's arguments filed 12/05/02 have been fully considered but they are not persuasive. Arguments although have been persuasive with respect to claims directed to the combination of nanofiltration (ion selective membrane) and MSFD, vapor compression type desalination units and the blending to adjust temperature requirements in the desalination unit, have not been persuasive in regard to the "top operating temperature:" benefits from the blending of the nanofiltration permeate with and additional more concentrated stream previous to the distillation with reverse osmosis membrane. The prior art above clearly teaches the combination of membranes for producing purified water or potable water. Treating only a portion of the feed to the reverse osmosis membrane unit by a reverse osmosis membrane unit is known to soften the water, as discussed in the references above, in a reverse osmosis plant, the less contaminated water is feed to the membrane, less pressure requirements, less expenses are involve in maintaining the process running, due to cleaning requirements. Furthermore, one skilled in the art at the time the invention was made can expect a reverse osmosis membrane to operate with different degree of feed water composition, and further expect mor membrane clogging when only a portion of the feed water is treated in a softening step, Al-Samadi clearly illustrates treating

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mixing streams from the nanofiltration and treatment of concentrated streams from a reverse osmosis, that can have mor contaminants depending on the type of membrane selected for treating the concentrate from the first nanofiltration membrane, which mixture is further treated in a reverse osmosis membrane.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CAR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CAR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana Fortuna whose telephone number is (703) 308-3857. The examiner can normally be reached on Monday-Friday from 9:30 to 6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached on (703) 308-0457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 for regular responses, and (703)872-9311 for after finals.

Ana Fortuna

February 24, 2003



**ANA FORTUNA**  
**PRIMARY EXAMINER**